

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 303451WO/JND	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/GB2004/002445	International filing date (day/month/year) 10/06/2004	(Earliest) Priority Date (day/month/year) 10/06/2003
Applicant  PENTRAXIN THERAPEUTICS LIMITED		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 07 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☒ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

**4. With regard to the title,**

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

COMPOUNDS INHIBITING THE BINDING OF SAP FOR TREATING OSTEOARTHRITIS

**5. With regard to the abstract,**

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

**6. With regards to the drawings,**

a. the figure of the drawings to be published with the abstract is Figure No. \_\_\_\_\_

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☒ none of the figures is to be published with the abstract.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/GB2004/002445

Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

Use of an agent capable of inhibiting serum amyloid P component (SAP) ligand binding activity or depleting SAP from the plasma of a subject for the production of a medicament for treatment or prevention of osteoarthritis in the subject.

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/GB2004/002445

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 A61K31/401 A61K31/4025 A61P19/02

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, CHEM ABS Data, EMBASE, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>KELLY G S: "THE ROLE OF GLUCOSAMINE SULFATE AND CHONDROITIN SULFATES IN THE TREATMENT OF DEGENERATIVE JOINT DISEASE" ALTERNATIVE MEDICINE REVIEW, THORNE RESEARCH INC., SANDPOINT,, US, vol. 3, no. 1, February 1998 (1998-02), pages 27-39, XP008012647 ISSN: 1089-5159 page 34, left-hand column, paragraph 3 page 36, left-hand column, paragraph 1 ----- -/--</p>	1-8



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

19 August 2004

Date of mailing of the international search report

07/09/2004

Name and mailing address of the ISA

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## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/GB2004/002445

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MOUSA SHAKER A ET AL: "Effect of Low Molecular Weight Heparin and Different Heparin Molecular Weight Fractions on Aggrecanase Activity: Structure-Function Relationship." BLOOD, vol. 100, no. 11, 16 November 2002 (2002-11-16), page Abstract No. 3849, XP009035115 & 44TH ANNUAL MEETING OF THE AMERICAN SOCIETY OF HEMATOLOGY; PHILADELPHIA, PA, USA; DECEMBER 06-10, 2002 ISSN: 0006-4971 abstract	1-8,12, 13
X	----- DATABASE BIOSIS 'Online! BIOSCIENCES INFORMATION SERVICE, PHILADELPHIA, PA, US; 1986, ASKAROV A F ET AL: "TREATMENT OF OSTEOARTHRITIS DEFORMANS WITH HEPARIN" XP002291995 Database accession no. PREV198732043592 abstract & KAZANSKII MEDITSINSKII ZHURNAL, vol. 67, no. 3, 1986, pages 190-192, ISSN: 0368-4814	1-8,12, 13
X	----- NATCHUS MICHAEL G ET AL: "Development of new hydroxamate matrix metalloproteinase inhibitors derived from functionalized 4-aminoprolines" JOURNAL OF MEDICINAL CHEMISTRY, vol. 43, no. 26, 28 December 2000 (2000-12-28), pages 4948-4963, XP002291993 ISSN: 0022-2623 page 4948, left-hand column, paragraph 1 page 4949 - page 4950; figures 1-3 page 4951 - page 4952; tables 1-4 page 4962, last paragraph	1-9,12, 13
Y	----- EP 0 915 088 A (HOFFMANN LA ROCHE) 12 May 1999 (1999-05-12) cited in the application paragraph '0001! paragraph '0004! paragraph '0006! paragraph '0040! ----- -/--	1-13

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB2004/002445

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>PEPYS M B ET AL: "Targeted pharmacological depletion of serum amyloid P component for treatment of human amyloidosis"</p> <p>NATURE, MACMILLAN JOURNALS LTD. LONDON, GB,</p> <p>vol. 417, no. 6886, 2002, pages 254-259, XP002219442</p> <p>ISSN: 0028-0836</p> <p>page 254, left-hand column, paragraph 1</p> <p>page 254; figure 1</p> <p>page 258, right-hand column, last paragraph</p>	1-13
Y	<p>ATHANASOU N A ET AL: "LOCALIZED DEPOSITION OF AMYLOID IN ARTICULAR CARTILAGE"</p> <p>HISTOPATHOLOGY (OXFORD),</p> <p>vol. 20, no. 1, 1992, pages 41-46, XP009035060</p> <p>ISSN: 0309-0167</p> <p>page 42; table 1</p> <p>page 45, last paragraph</p>	1-13
A	<p>HAMAZAKI H: "CALCIUM-DEPENDENT POLYMERIZATION OF HUMAN SERUM AMYLOID P COMPONENT IS INHIBITED BY HEPARIN AND DEXTRAN SULFATE"</p> <p>BIOCHIMICA ET BIOPHYSICA ACTA, AMSTERDAM, NL,</p> <p>vol. 998, no. 3, 1989, pages 231-235, XP008005137</p> <p>ISSN: 0006-3002</p> <p>page 233; table 1</p> <p>page 233, last paragraph</p>	1-13
A	<p>SUKENIK S ET AL: "SERUM AND SYNOVIAL FLUID LEVELS OF SERUM AMYLOID A PROTEIN AND C-REACTIVE PROTEIN IN INFLAMMATORY AND NONINFLAMMATORY ARTHRITIS"</p> <p>JOURNAL OF RHEUMATOLOGY,</p> <p>vol. 15, no. 6, 1988, pages 942-945, XP009035058</p> <p>ISSN: 0315-162X</p> <p>abstract</p>	1-13

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/GB2004/002445

## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
  
Although claim 13 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; It is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB2004/002445

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0915088	A	12-05-1999	EP 0915088 A1	12-05-1999
			SI 915088 T1	31-12-2002
			AT 224366 T	15-10-2002
			AU 750734 B2	25-07-2002
			AU 8959998 A	20-05-1999
			BR 9804378 A	13-06-2000
			CA 2252163 A1	30-04-1999
			CN 1217327 A	26-05-1999
			CZ 9803463 A3	12-05-1999
			DE 69808017 D1	24-10-2002
			DE 69808017 T2	30-04-2003
			DK 915088 T3	27-01-2003
			ES 2182203 T3	01-03-2003
			HR 980572 A1	31-08-1999
			HU 9802465 A1	28-12-2000
			ID 21194 A	06-05-1999
			IL 126787 A	10-12-2003
			JP 3048558 B2	05-06-2000
			JP 11209343 A	03-08-1999
			NO 985059 A	03-05-1999
			PL 329440 A1	10-05-1999
			PT 915088 T	31-01-2003
			RU 2201937 C2	10-04-2003
			SG 74094 A1	18-07-2000
			TR 9802197 A2	21-05-1999
			US 6103910 A	15-08-2000
			US 2003100770 A1	29-05-2003
			US 6262089 B1	17-07-2001
			US 6512001 B1	28-01-2003
			ZA 9809889 A	30-04-1999
			NZ 332530 A	26-05-2000